F.I.R.E.S. Program

Fire Inspections Relating to Existing Structures Program

BY: Marilyn Arnlund
Maple Grove Fire Prevention Bureau
Maple Grove, Minnesota

An applied research project submitted to the National Fire Academy
as part of the executive Fire Officer Program

August 1998

Abstract

The problem was that there were approximately 900 businesses in the city that were not being inspected. The purpose was to find out if other departments had used paid-on-call firefighters to conduct successful inspections. An important aspect was to discover mistakes and conclusions others made in setting up such a program. Action research was used. The research questions were:

1. Are there existing inspection programs that utilize paid-on-call firefighters to do fire inspections?
2. How extensive should training be?
3. How are firefighters convinced to direct their commitment from suppression to prevention?
4. How do you instill the same level of professionalism and customer service in part-time fire inspectors as expected from full-time inspectors?

The procedures involved searching for information on paid-on-call firefighters conducting inspections. Due to limited resources, the search included company fire inspections.

Whether personnel were volunteer, paid-on-call, or full-time was not an important issue. The vital criteria were training, customer service, and a desire to work in prevention. Training needed to be extensive enough to bring an individual to a level where they felt confident and proficient in the areas and hazards in which they conducted inspections.

Marketing the relevance of prevention to suppression proved successful to convince firefighters to redirect their level of commitment.

Recommendations were made to hire paid-on-call firefighters as inspectors. A marketing plan was implemented to promote the vision of the program. A list of requisite classes necessary

to apply was prepared for distribution to interested individuals. These classes were essential to prepare individuals for an in-house training program. A National Fire Academy inspection course, supplemented with instruction on the adopted codes, policies, procedures, city ordinances, and customer service curriculum, was recommended.

Lastly, a request was made to the Minnesota College system to offer a degree or certificate program for fire prevention personnel.

TABLE OF CONTENTS

Introduction

Firefighters spend a great deal of time preparing for an event that should never happen. When it does occur, brave and capable individuals respond to the emergency and control it for the sake of community safety.

The fire service can truly boast that it has a 100 percent suppression success rate: Every fire that has ever started has eventually been extinguished. So it could be said that careless people equal a successful fire service, which leads to job security, right? Not quite.

In reality, careless people equal property lost, lives lost, and firefighter deaths. This is nothing to boast about.

With this thought in mind, perhaps the 100 percent success rate isn't exactly relevant. From a prevention perspective, any occurrence of fire in the first place is a sign of failure.

Therefore, should the fire service be placing greater emphasis on *preventing* fires or *fighting* fires? Maybe the time has come to develop new criteria for success. The fire service has traditionally justified its existence by the number of responses, the amount of hose used or the number of suppression tasks performed….the fire service might as well accept the inevitable and take up the challenge of preventing as many fires as possible. This focus keeps fires from occurring, rather than managing fires after damage, injury and death have already occurred….can all fires be prevented? Probably not. But the fire service should never stop striving to reach this ideal. High expectations most often achieve high results (Porth, 1994, p. 6).

Maple Grove, Minnesota, is a medium size community of approximately 47,280 situated on 36 square miles. Maple Grove is an outer ring suburb of the twin cities of Minneapolis and Saint Paul. The city is growing by leaps and bounds. The Fire Prevention Bureau is made of up a fire marshal, two full-time fire inspectors and one full-time secretary. A third fire inspector is proposed to be hired in the fall of 1998.

Due to the aggressive commercial and industrial construction the city is experiencing, staff concentrates most of their inspection and plan review activities to new construction. In light of this, the bureau is also responsible for family day care and foster care inspections, kitchen hood and duct inspections, and elevator inspections. Other items include, emergency facility planning for facilities using hazardous materials, and various permits for new aboveground and underground tanks, fire protection systems, blasting operations using explosives, fireworks, tents, carnivals, fairs and special events, and the use of flammable and combustible liquids in operations such as in spray booths. The bureau also provides training to the fire department officers and firefighters on fire alarm and suppression systems, pre-fire planning on new occupancies, building construction and other subjects as requested. A juvenile firesetter intervention program is also managed utilizing 14 paid-on-call firefighters and community volunteers.

In 1998 alone, approximately 35 to 50 new commercial and industrial buildings will be constructed. Many of these are over 100,000 square feet and have complicated code features to deal with. The majority of buildings constructed in Maple Grove are built on a fast track system that furthers complicates the process. This requires much coordination, quick turn around on plan review, and a considerable amount of effective communication.

> …once a building is inspected and a certificate of occupancy is issued, building inspectors do not usually return, unless the building has been renovated or an addition built. The lack of reinspection also has implications for buildings that are built on speculation. Often, these buildings will have no sprinkler protection or a system designed for low hazards. And this means that protection in the building may not be adequate for the ultimate occupancy, especially if it involves high-challenge plastics or other combustible material. (IRI Sentinel, 1994, p. 6)

The problem is that there are approximately 900 businesses in the city that are not inspected unless there is a complaint filed. When an inspection is conducted at this point, the code problems found are usually very extensive and require a considerable time commitment from the fire inspector. Time is a precious commodity that is already stretched beyond its most efficient levels. In an effort to inspect these businesses on a regular basis, this author decided to research the possibility of hiring part-time fire inspectors who are paid-on-call firefighters to inspect existing businesses in the city. Because these firefighters are paid on call, they all have other full-time jobs. These firefighters may work night shifts, middle shifts or during the day. They come from a multitude of different career backgrounds such as electrical, carpentry, sales, engineering, medical fields, management, computer fields, landscaping, mechanics, financial and industrial services to name a few. One thing they all have in common is the fire service. They have a training background that includes fire behavior, fire suppression, building construction, hazardous materials, and basic fire safety. “Proper fire code enforcement requires a tremendous amount of firefighting knowledge” (Corbett, 1990, p. 67).

The significant purpose of this research was to find out if other fire departments have used paid-on-call firefighters to do fire inspections and if it was successful. An important aspect

of this research project was to discover what mistakes and conclusions others made in setting up such a program. With positive research results, a program proposal using paid-on-call firefighters will be presented to the mayor and city council.

Action research was conducted to answer these questions:

1. Are there existing inspection programs that utilize paid-on-call firefighters to do fire inspections?
2. How extensive should training be?
3. How are firefighters convinced to direct their commitment from suppression to prevention?
4. How do you instill the same level of professionalism and customer service in part-time fire inspectors as expected from full-time inspectors?

Background and Significance

The book, America Burning, was written in 1973. Today the insight of America Burning is still relevant in many cases as if it was written in 1998.

> While genuine economic problems often stand in the way of deeper investment in fire protection, lack of understanding of fire's threat helps to account for the low priority given fire protection. And while those who have survived a fire never forget its destructive potential, for most Americans fire appears a remote danger that justifies indifference.
>
> But indifference exists where it is least excusable. For example, there are those in the fire services who are unaware of the technological state-of-the-art in their field. There are fire department administrators who pay lip service to fire prevention then do little to

promote it. The public shares their unconcern, for in the public's image – an image which firefighters share – the fire department is a heroic-proportioned battalion of people rescuers and fire suppressers, not a professional corps of fire preventers. (National Commission on Fire Prevention and Control, 1973, p.2)

Indifferent to fire as a national problem, Americans are similarly careless about fire as a personal threat. There is an old saying in the fire protection field, to the effect that fires have three causes: men, women, and children. It takes the careless or unwise action of a human being, in most cases, to begin a destructive fire. (National Commission on Fire Prevention and Control, 1973, p. 4)

The book, America Burning, Revisited, written in 1987, found the following:

As a result of increased and improved fire prevention and education, improved building and fire codes, improved fire prevention bureau plan check and inspection programs, increased awareness of the danger of fire, the decreased number of people under the age of 25 and an improved national economy,

…the overall demand for fire suppression services is expected to decrease in the future. However, the demand for *fire protectio*n will continue and possibly even increase as the effort is shifting to fire prevention and public education duties. Duties which are expected to increase (especially as the number and complexity of codes increases) include:

- reviewing proposed developments;
- reviewing construction plans (particularly for automatic detection and suppression systems);
- monitoring and inspecting construction and testing systems;

- conducting final inspections and issuing certificates of occupancy;
- conducting on-going inspections and corresponding codes;
- organizing and conducting public fire safety education classes; and
- creating and maintaining a high level of public awareness concerning fire prevention and fire safety. (pp. 13, 15-16)

When an impartial person considers these two scenarios: first, firefighters sitting in a fire station waiting to react to a fire call; or second, a firefighter or fire inspector who is out in the community meeting business owners and working together to identify fire hazards and then abating those hazards; the feeling will probably be universal. "Customers want to see the fire department members out doing something or being somewhere" (Smith, 1997, p. 78). The first paragraph of the introduction of the IFSTA, Fire Inspection and Code Enforcement, Fifth Edition says with eloquence:

> Fire suppression activities are not the only way to combat fires: a well-planned and executed fire prevention and inspection program is a less expensive and more effective way to accomplish the goal of the fire service. The goal is, of course, to minimize the risk of life and property loss from fire. By observing, making recommendations, and subsequently controlling and eliminating hazardous conditions, the inspector can make major strides towards accomplishing this goal before a fire occurs. The inspector also helps to educate occupants in ways to control hazards, in proper methods of evacuation, and in overall fire safety practices. (p. 1)

Fire protection, from a built-in fire protection standpoint, has improved significantly over the years. Today, with the model codes available combined with built-in fire protection, building fire safety is a real possibility and within our grasp. Reaching back as far as 1987, these realities

were published in America Burning, Revisited, (FEMA, 1987) while also seeing that the future would bring other new hazards to our society.

> The fire protection aspects of the built environment have changed dramatically during this century. Building and fire codes have eliminated many hazards, for example, inadequate exits, and have required such new fire safety features as smoke detectors and sprinklers. However, new building designs (e.g., atriums, high-rises), construction and furnishing materials, and uses, (e.g., the processing of hazardous materials) have created new hazards and dramatically increased safety risks. Furthermore, it is expected that this process of eliminating and creating fire safety hazards will continue in the future. (p. 75)

Many successes have been documented that proves that fire prevention works:

> Rural/Metro Corporation, a private company, provides fire service for the city of Scottsdale, Arizona. Rural/Metro offers Scottsdale exceptional service in two major areas: cost to the taxpayers and fire losses. Under Rural/Metro's protection, Scottdale's per capita cost for fire service is 49% lower than the national average. Rural/Metro's success is attributed to its emphasis on Fire Prevention. (Gardiner & Jenaway, 1995, p. 21)

> If firefighters in other countries do not respond to fires as quickly as firefighters in the U. S., why are their fire deaths lower? Simply put, it is a function of the level of resources devoted to fire suppression versus fire prevention. Other countries place a higher premium on their ability to ***prevent*** rather than their ability to put them out once they occur. (FEMA, FA 169, p. 11)

The plea for fire prevention efforts across the state is made in the annual Minnesota State Fire Marshal report:

> Dollar loss from fires remains high in Minnesota and continues to be a costly problem. Commitment to stop fires before they occur is the only way to stop the significant loss of life and property from fire. This can only occur if there is a recommitment to public education and fire prevention efforts. (Fire in Minnesota, 1996, p. 7)

Not only have fire prevention and code enforcement proven effective, but also it is emphasized that prevention and code enforcement need to take a front seat in the fire service. "The future of fire protection is fire prevention. The fire service needs to reinforce its energies from fire suppression to fire prevention" (Gardiner & Jenaway, 1995, p. 69).

> With proactive fire prevention inspections and public education, coupled with thorough code enforcement, you can begin to attack these enemies right away. So, don't sit around and let these enemies invade and brutalize your community; rather, exercise your leadership and management responsibilities by implementing a full-scale war on the fire hazards in your jurisdiction! (Halas, 1991, p. 16)

> Fire code enforcement is one of the most critical issues facing the fire service, said Kevin Mellott, president of ERASE Enterprises of Pittsburgh, Pennsylvania. That's because fire prevention programs are ineffective if codes are not enforced adequately. And prevention has to be given the same priority as fire suppression. (Managing Effective Code Enforcement, 1991, p. 32)

The authors of Fire Protection in the 21st Century suggest that any fire department can take actions to put into place some or all of the strategies used by the Rural/Metro Corporation including:

- Expanding your public fire prevention programs;

- Promoting fire codes requiring automatic sprinklers and fire preventive building design;
- Increasing inspections of existing structures;
- Working with developers before and during construction to ensure codes are enforced;
- Adopting a staffing structure which utilizes more part-time, on-call firefighters. (Gardiner & Jenaway, 1995, p. 24)

This research is relevant to the Executive Development course because it relates to Module 2, the Change Management Model studied in Strategic Management of Change. Two phases of the Change Management Model were concluded during this research: Phase 1, Analysis, and Phase 2, Planning. The existing situation was analyzed and changes that needed to be made were assessed. The perspective of change was determined to be developmental. An executive officer/leader strategy was used to develop the vision and the people method of change was employed through training and team building activities. During the planning phase, goals, objectives, and strategies were formulated.

Literature Review

The literature review used in the preparation of this research paper included journals, periodicals, books, manuals, and published Executive Fire Officer applied research projects (EFO ARP).

In Gary Eberle's (1993) EFO ARP, he summed up his research in using volunteers for fire inspections, "For organizations that are combination volunteer and paid, volunteers are a

viable tool in maintaining or increasing the enforcement of fire codes through inspections" (p. 8). Meyer (1991) indicated, "Even in smaller communities without code enforcement departments, volunteer inspection services are usually received enthusiastically" (p. 91).

In making the decision to use fire suppression personnel to conduct fire inspections, multiple benefits were discovered by Robert L. Miller, (1992) as outlined in his EFO ARP,

> It was decided that business inspections, other than high hazards and high occupancy structures, would be inspected by the suppression personnel within their prospective districts. It was quickly decided that utilizing fire suppression personnel could have other advantages.
>
> 1. New suppression personnel will become more familiar with the district, and the district's businesses they are supposed to protect.
> 2. Fire suppression activities such as preplanning and ownership information can be kept up-to-date. The cities' police departments were also quite appreciative when they received this information.
> 3. Station personnel had a tendency to get to know the people that they are to protect. This developed rapport between business owners and firemen.
> 4. Elimination of fire hazards, which will reduce business losses due to fire. (p. 1)

Larry Donner (1997) wrote, "There is a direct link between code enforcement and life safety, because even the best fire codes are worthless without an effective inspection program" (p. 100). He said that fire suppression companies can provide the solution to complete all the inspections (p. 100). Hendges (1991) reported, "The decision to utilize suppression personnel to assist in code enforcement was an economic one, as well as an effort to increase productivity"

(p. 13). Paul Dextras researched fire prevention as a priority mission in the fire service in 1992, he wrote,

> If the fire service is truly proactive, the concept of prevention should be of primary importance. Due to limited resources, response times, construction methods, and human capabilities, a fire department that is suppression oriented is truly flirting with imminent danger. The time has come for those in the fire service to take fire prevention to new levels of professionalism. (p. 1)

The firefighters' ability to serve their communities is limitless, but only if they are willing to expand their roles beyond fighting fires. Brandewie (1996) recognized, "The fire service already has an infrastructure in every neighborhood. Our opportunities to serve our communities are boundless, but only if we step beyond the bounds of the traditional fire service orientation" (p. 64).

The Fire Chief's Handbook points out that the community's perception of the fire prevention bureau is high. The people in the community see these individuals as experts and expect that they will identify and abate fire hazards in their communities. If paid-on-call firefighters conduct fire inspections in businesses in their communities, training becomes an important factor. With these high expectations from the community, one must remember that it is not possible to please everyone. (Bachtler & Brennan, 1995, p. 964) "When the community's firefighters are required to enforce codes and regulations, it is not always possible to give all customers what they want. While we cannot realistically make all customers happy, they still expect responsive, flexible, and knowledgeable service" (Paulsgrove, 1991, p. 52). He goes on to explain that, "An effective service strategy can acknowledge these needs while focusing on service expectations that are reasonable and achievable in a regulatory role" (p. 54).

Being in a regulatory role, and striving to provide a high level of customer service, can be trying. Hayden (1993) points out how this is the case in the day to day operations that a fire inspector must deal with.

> Increasingly, especially in urban/suburban settings, property owners and tenants – whose only motivation is to make the most money possible without spending any funds to maintain their locations – are perpetuating life-threatening fire code violations on their properties. Included in this population are owners of multiple run-down properties, proprietors of quick-money schemes who have no intention of running a legitimate business, paper corporations hiding their assets and the identities of investors, and property owners who do not have the financial means to comply with the code. (p. 50)

In the State of New York, for example, we encountered the following violators:

- A paper corporation that leased a 15,000 square-foot building, filled it with hazardous chemicals and flammable liquid waste, and then abandoned it because it was too expensive to dispose of the materials.
- A property owner who rented rooms to 35 separate tenants in a single-family, three-bedroom frame house, using every inch of space from the attic to the cellar.
- A public assembly/bar/club located in the same building as a high-hazard Occupancy – in violation of the local building code – and with fire separations breached in several dozen spots; and
- An auto-body shop that continually sprays flammable liquid finishes on automobiles without having a code approved spray booth. The autos are sprayed inside and outside the shop while cutting torches are used nearby.

> In these cases, despite the fire code enforcement official's having used the best selling and public relations skills to define and discuss the above violations with the property owners or proprietors and a variety of persuasive techniques to attempt to get the violators to comply, zero results were obtained.
>
> We have found that the trend today is for people to question and defy authority: The paper corporation with the hazardous chemical accumulation evades us; the owner of the frame house renting bed space verbally threatens; the bar owner plays dumb, ignores us, and continually asks us to explain the problem; and the local auto body shop owner laughs every time we inspect and say, 'I will do as I please, and you ain't gonna do nuttin' about it!' (pp. 50-51).

Hayden (1993) pointed out that it is preferable to conduct fire inspections through sales skills, but there are times when a fire inspector must act in a true regulatory role.

> It would be ideal to be able to gain 100 percent compliance through public education and the sales skills of the fire safety personnel, but this is real life and it doesn't work that way. When monetary gains can result from violating the fire prevention code, there is a need for vigorous enforcement efforts on the part of the fire marshal/inspector. (p. 55)

Looking at training from another perspective, The Fire Chief's Handbook states: "An untrained fire prevention staff is dangerous both to the public and to firefighters as well as a waste of a city's financial resources" (Bachtler & Brennan, 1995, p. 971). It goes on to say, "Placing proper individuals in the bureau is an important goal for a fire prevention chief". How these individuals are chosen may have a huge impact on the success of the inspection program.

> It is critical that prospective personnel for the fire prevention bureau be selected based on their desire to work in the bureau, make a difference, be willing and able to learn, commit to the job for an extended period of time, and be willing to take on a new set of responsibilities, which are much different than those they had in a fire company. (Bachtler & Brennan, 1995, p. 971)

> Well-trained inspectors and plan reviewers are expected to enforce fire codes and standards uniformly. There is no room for selective enforcement. They are expected to prepare complete inspection and plan review reports, documenting all deficiencies noted during inspections or plan reviews. In the case of inspections, reasonable compliance dates should be set and follow-up inspections conducted.

> An advantage to standardized basic and advanced training for fire prevention personnel is that all of them will handle similar situations in the same manner. This avoids multiple interpretations. (Bachtler & Brennan, 1995, p. 985)

The NFPA Inspection Manual (1987) sums up the role of the fire inspector:

> Inspectors are part detective, part reporter, part technical consultant, part missionary, and part salesperson. An inspection should produce a property that is safer because the inspection was made, inspire an improved attitude toward fire prevention by management and employees, and provide a record of the findings and actions resulting from the inspection. (p. 7)

"Fire prevention personnel will be expected to have greater technical capabilities. Only constant training will keep them proficient in technological advances" (Bachtler & Brennan, 1995, p. 986). Corbett (1990) was in agreement with The Fire Chiefs Handbook (1995). He wrote, "Providing in-service training for members is an essential element of an effective fire

prevention program. Codes and laws are constantly changing and new technologies are rapidly evolving. Without periodic training, personnel cannot perform their duties adequately" (p. 68).

Corbett (1990) wrote that it is important that the individuals that work in the fire prevention bureau must have a desire to work there. A lot a time, money, and training are required to staff a bureau properly. If personnel lack interest, the program will be hampered and a high turnover rate will be realized (p. 67). He stated,

> Initial training is often centered around teaching the bureau's practices and procedures and then taking an in-depth look at the various codes and laws enforced in the jurisdiction.
>
> For inspectors and plan reviewers, training includes reviewing various types of hazards (hazardous processes, operations, storage, and so on) as well as building construction and fire protection systems. (p. 68)

The Fire Chiefs Handbook (1995) states that it is imperative that the fire inspector be well versed in both the building code and fire code. Other codes that were cited as important include,

> The mechanical code has implications for the fire inspector because it is in this code that heating appliance requirements as well as requirements for smoke detectors in air-handling systems are found.
>
> The plumbing code also has implications for the fire inspector and plan reviewer. One example is the regulations that govern combined domestic and fire protection water supplies used in single-family fire sprinkler systems.
>
> The National Electrical Code, used for nearly all electrical installations in the U.S. is published by the NFPA as NFPA 70. Within its many pages, the fire inspector or plan

> reviewer can find requirements for fire alarm wiring and wiring used in hazardous environments. (p. 982)

According to Corbett (1990),

> Providing in-service training for members is an essential element of an effective fire prevention program…More recently college fire science programs have provided an opportunity for fire prevention personnel to obtain college degrees. In addition, the National Fire Academy, satellite TV, and prerecorded programs have broadened many fire inspectors' training. (p. 68)

Hendges (1991) learned from a classmate at the National Fire Academy (NFA) about a field program that could be purchased from the NFA to use as an in-house training aid for their inspectors. He bought the program and felt that it had credibility, was easily obtained, could be presented in several short sessions and was economical. Additionally, he integrated excerpts from the NFA Fire Prevention Specialist II course and parts of the course from the State of Michigan Certified Fire Inspector course. (pp. 13-14)

Dextras (1992) observed, "Since a current certification exists, it seems logical the professional fire service organization would pursue this objective for their inspection and prevention officers" (p. 14).

Miller (1992) discovered, "It quickly became obvious that I could not just wave a wand and make inspectors out of firemen, as we had been attempting to do…All suppression forces would be brought to the level of Inspector I, and maintain that level throughout the years" (p. 4).

At this point, the author questioned what made an effective inspection program. Training and customer service appeared to be the buzzwords through out the literature that was researched. Gibbs (1995) wrote, "In the public and nonprofit sectors, continuous management

improvement and reinvention initiatives often have focused on the community as a customer or on identifying and effectively responding to internal customers" (p. 14). Additionally, Gibbs impressed, "While it is true that managers do not control the quality of the product when the product is service, service improvement starts at the top, and managers must 'walk the talk'" (p. 16).

Zapp! The Lightning of Empowerment (1992) explains how to improve quality, productivity, and employee satisfaction. "It is a fable about the troubles and triumphs of workers in a make-believe department headed by a guy named Joe Mode" (p. vii).

Examples of what Zapps people:

Responsibility

Trust

Being listened to

Teams

Solving problems as a team

Praise

Recognition for ideas

Knowing why you're important to the organization

Flexible controls

Direction (clear key results areas, measurements, goals)

Knowledge (skills, training, information, goals)

Support (approval, coaching, feedback, encouragement)

Resources readily available

Upward and downward communications (p. 56)

> Every department should have a customer relations/customer service program, and all employees should feel they have a stake in the program's success. The program should include provisions for getting all department members involved and enthusiastic, objectives to be met, and plans for training. Training modules should cover topics such as the proper way to answer and talk on the telephone, appropriate dress, apparatus and station appearance, and dealing with complaints.
>
> Everyone in the organization, from the top to the bottom, should be concerned about giving good customer service. Probably the division that has the most contact with the customer, however, is the fire prevention division. These fire department members deal with the customer on a day-to-day basis. The fire prevention division mainly does fire inspections, plan reviews, fire investigations, and public education. Customers usually are referred to the fire prevention division when they have complaints or miscellaneous inquiries. The fire prevention division should be best prepared to deal with customers and train all personnel on how to deal with them. Training employees in how to deal with customers can help greatly in projecting a good image to customers. (Smith, 1997, p. 78)

Smith goes on to say, "The customer wants good service and expects it in all industries, including the fire service" (p. 78). A thought provoking remark from Smith causes one to stop and consider customer service in another light, "Customer service is not a straight line but a circle; this is especially true in the fire service" (p. 80). He continues by writing, "The opportunity for good customer service is always there. It can be applied in emergency as well as nonemergency situations. A good opportunity should never be passed by or overlooked" (p. 82). In order to evaluate customer service within your department Smith suggested, "The fire

department is told to get out and make contact with the customers, and it does. How does it know if that contact is positive or negative? A system to receive customer immediate and long-term feedback should be developed" (p. 82).

Desatnick (1987) writes, "All employees are taught exactly what is meant by service superiority and exactly how to achieve it" (p. 52). He continues by writing, the first session of an orientation program should include a traditions program that consists of: "Who we are, what we represent, how we do business, our company values, our common language, explanation and discussion of why we are in business, who our competitors are, who our customers are, and how we treat them" (p. 40). He summed it up by writing,

> Superiority in customer service does not happen by chance. When the right things happen from a customer's point of view, it is a combination of doing many things right and doing the right thing on a day-to-day basis.
>
> People will do the right things, and do things right, if they are properly trained to do so. Employees who are well-trained produce superior products, which in turn require a minimum of service. And training is continuously repeated to reinforce the learning and maintain the desired behavior. (p. 51)

Desatnick (1987) reported on a 1985 study conducted for the White House Office of Comsumer Affairs by TARP, Washington D.C., consultant. The report showed significant findings of how no business can survive without satisfied customers:

- 96 percent of unhappy customers never complain about rude or discourteous treatment, *but*
- 90 percent or more who are dissatisfied with the service they receive will not buy again or come back. *Worse still*

- Each of those unhappy customers will tell his or her story to at least nine other people,
- 13 percent of those unhappy former customers will tell their stories to more than twenty people. (p. 4)

Paulsgrove (1991) wrote, "The application of customer service methodology to a fire prevention delivery system is more complex. A customer service philosophy dedicated to total public satisfaction must be weighed against the community's need for regulation" (p. 54). Templeton (1996) felt that you should understand how customers perceive service quality. He asks you to consider how your customers would rate your department. He feels that, unknowingly, customers use the following variables to determine whether they are receiving quality customer service:

- Reliability: the consistency and dependability of your performance.
- Responsiveness: your willingness or readiness to provide service.
- Competence: having the required skills and knowledge.
- Access: the organization's approachability and ease of contact.
- Courtesy: politeness, respect, and friendliness.
- Communication: keeping customers informed in terms they understand.
- Credibility: trustworthiness, believability, honesty and having the customer's best interest at heart.
- Security: freedom from danger, risk, or doubt.
- Understanding: working to know the customer's needs.

- Tangibles: the physical evidence of service, such as the upkeep of the buildings, the appearance of personnel, the condition of tools and the treatment of other customers. (p. 67)

Dennis Brown (1991) found the following when conducting research for his EFO ARP:

> As a result of this project the emphasis of company inspections was placed on working with business owners to eliminate fire hazards instead of correcting code violations. In addition, recommendations were made to view employees as customers, and to measure the success of the inspection program in terms of customer satisfaction rather than the more traditional measures of productivity. (p. ii)

During the review of an EFO ARP by Lyle Feisch of the Rochester, MN, Fire Department (1996), he noted, "In order for the new inspection program to be successful, the needs of the firefighters as shareholders would have to be addressed" (p. 7). Feisch found that,

> …for the firefighters to buy into a new company inspection program, they must first be given clear objectives that are inline with the department's overall mission, be involved in changes made to the program and be given regular feedback and positive reinforcement on their progress. Involvement is absolutely necessary by the fire marshal and fire prevention staff to provide training and technical support and to remove any barriers to their satisfaction with the program. (p. ii)

Through interviews with shift commanders, company officers and firefighters, Feisch (1996) discovered,

> …the primary objections to the inspection process in Rochester were (1) a difficult computer data entry process, (2) a desire to focus on pre-plan instead of code

> enforcement as the reason for the inspections, (3) a desire to avoid the code enforcer role, (4) a general desire for more training in fire prevention and the fire code, and (5) a need to feel the inspections were necessary and meaningful to the overall mission of the fire department. (p. i)

Hendges (1991) researched how to establish a company inspection program. He noted that training can insure quality fire safety inspections so that fire hazards do not go unnoticed. One of the most significant benefits of the program is the increased knowledge of the suppression personnel, both in fire prevention procedures and details of buildings and their contents (p.12).

Campbell (1991) researched why company inspections fail, and essential elements to a successful program. He reported, "More than any other single factor, training is the critical element in a successful company level inspection program. Training should start in small groups, even as single interested individuals" (p. 13).

Carter and Rausch (1989) listed ten cultural issues that tend to bias firefighters against the inspection process and are hard to overcome. Although these cultural issues were written in 1989, they are unfortunately still valid today.

1. Firefighters want to fight fires.
2. Some firefighters may not have good people skills when meeting the public.
3. Firefighters may be uncomfortable in their best uniform and on their best behavior.
4. Firefighters are not comfortable interrupting the business owners for the inspection.
5. Firefighters need to connect fire prevention with their primary duty.

6. Firefighters must identify and accept the common goal of inspections.
7. Firefighters must feel comfortable explaining code requirements not easily understood by the public.
8. Firefighters must feel prepared to answer tough code questions.
9. Firefighters must be prepared to deal with negative public reactions to the inspection.
10. Inspections normally result in a longer or more intense workday. (pp.184-185)

Larry Donner (1997) of the Boulder Fire Department marketed his company inspection program to firefighters by placing an emphasis on citizen and firefighter safety. “Firefighters know they’re protecting themselves and our citizens by providing quality fire code inspections” (p. 104). Jim Campbell (1994) of Pike Township Fire Department, Indiana, conducted a survey and found, “When asked to write in what each individual thought were the essential elements to the success of their company level inspection programs, an amazing 92% stated that proper and/or ongoing training was the key” (p. 9). He also found,

> Listed as a necessary adjunct to nearly any successful program was the use of checklists. …the checklists, it was felt, should be of sufficient detail as to leave little room for guesswork, yet it was also believed that they should be made as simple as possible. In all, 80% of the departments responding indicated that they used or considered checklists as essential element in a company level inspection program. (p. 10)

Campbell (1994), like Donner (1997), marketed the company inspection program to firefighters. He emphasized the relevance of the company level inspection in providing for firefighter safety through familiarization of various occupancies. He explained that the training must be made relevant and not be rushed (p. 13).

> Personnel should be made to understand that there are reasons behind the seemingly myriad and complex numbers of codes. Relevance is achieved by demonstrating the relationship between various code elements and their expected effect on the spread of fire or allowance of safe egress by occupants….Training should not be rushed. Companies must be given adequate development time in order to gain the confidence necessary to ensure a positive public image and merit technical proficiency. (p. 14)

To further insure a successful inspection program, Campbell (1994) states, "Forms must be clear, concise, and easy to use. Every successful company level inspection program had forms that served as both a checklist and a resource. Forms must not be unduly complex or difficult to read" (p.14). Hendges (1991) stated,

> To memorialize the violations or other conditions found during an inspection, it is necessary to create a written document. This creates a 'paper trail', should further enforcement action be necessary. Through the use of a pre-printed form, consistency in identification of common hazards is insured. (p. 22)

Campbell, like Hendges, believed that through the use of a pre-printed form, consistency is insured (p. 4).

Paulsgrove (1991) stated, "It is important to evaluate how our letters and forms represent us professionally" (pp. 55-56).

> A property inspection program carried out by trained personnel is the backbone of a total fire prevention program. Nothing can take the place of an on-site visit and one-on-one discussion with the property owner or manager to eliminate potentials for fire.…A total inspection program will cover both existing and new construction. The approaches

to the resolution of problems associated with existing properties are significantly different than those for new construction. In addition, some types of occupancies require special inspections, owing to the hazards associated with materials used on the site, industrial or commercial processes, or number of occupants.

All available personnel resources should be utilized to assist the inspection programs. Each person should have specialized training in the types of properties to be inspected. Equally important is the availability of material resources such as code books, reference standards, and data collection forms. Periodic refresher courses and technical assistance to resolve issues help sustain interest and keep the program on track. (Teems, 1988, p. 385)

From the publication Fire Death Rate Trends: An International Perspective, (1997), strategies are listed that appear to offer the best means of 'reinventing' fire protection in the United States:

- better funding and fire department staffing of fire prevention activities;
- improving public awareness of the fire problem;
- changing attitudes about the acceptability of fire;
- teaching people how to protect themselves from fire; and
- teaching people what to do in the event of a fire to minimize the losses to both persons and property. (pp. 17-18)

During the past 10 years, the field of fire code enforcement has become more professional. Many states have adopted minimum standards for educating and training code enforcement officials and have increased the emphasis on continual in-service training and education. The knowledge of code enforcement personnel has increased

greatly, and their ability to cite problems and intelligently discuss code infractions is at a level where they often can question the work of certified architects and engineers. (Hayden, 1993, p. 50)

To do their jobs well, and to be committed to superior performance, employees need to know:

1. Exactly what is expected of them; a clear definition of their specific assigned duties and the activities for which they will be held responsible and accountable.
2. Where their jobs fit into the total picture and why they are important.
3. How their jobs affect other jobs within the organization and vice versa.
4. How their mistakes affect others within and outside the organization and vice versa.
5. The specific factors and criteria on which their performance will be judged, behavioral as well as technical job content. For example, service, courtesy, quality, quantity, cost, innovation, accuracy, and self-development.
6. Exactly how performance will be measured-quantitatively, qualitatively, and behaviorally. For example, a series of statements describe the conditions that should exist, if each job responsibility has been adequately performed.
7. For each area of responsibility, what constitutes below-standard, standard, or exceptional performance, in both quantitative and qualitative terms.
8. Periodic progress reviews to let individuals know where they stand and how well they are doing.
9. How to improve their performance and increase their contribution to the organization.

10. How to develop themselves in their jobs and in the organization (employees are saying they want and need to be coached). (Desatnick, 1987, p. 19)

On a different note, Hennessey (1991) felt that firefighters and fire inspectors needed to be rewarded for their contributions that would lead to higher motivation.

> Show your people they are valuable to the organization. Reward them for special achievements and contributions to the organization. This should be done personally and publicly, and the reward can be material or financial. Let your firefighters know you care about them. (p. 95)

In order to sell fire prevention to firefighters, it is best said by Hennessey, (1991), "The fire service has traditionally honored its heroes, but we must realize there is more than one way to define 'hero'" (p. 96).

Procedures

Initial research began at the Learning Resource Center (LRC), in Emmitsburg, MD, to find articles in journals and periodicals that related to fire inspections that were conducted by firefighters, specifically, paid-on-call firefighters. Reports such as EFO ARP were reviewed as well as books and manuals.

Accessing the LRC's online card catalog from a home computer continued the literature search. The Minnesota Fire Center Library was also used to access information as well as the local library. The limitations in searching for articles and books on fire inspections conducted by paid-on-call firefighters was that a majority of the information found related to inspections conducted by full-time career firefighters. Although the information was valuable, philosophies

were somewhat different. Basically, in a career setting, the firefighters were mandated to do fire inspections, whereas in a paid-on-call setting, the firefighters would apply to become a fire inspector on a part-time basis.

The EFO ARP were the most valuable tools to discover what mistakes and conclusions others made in setting up an inspection program. The EFO ARP provided real life research and documentation.

Definitions

Successful: Fire inspections are comprehensive, the inspectors are well trained, and the business community accepts these fire inspectors on the same professional level as a full-time fire inspector.

Fast track construction system: Process to speed completion of a structure by starting work before plans are completed and reviewed. Construction plans may be submitted for plan review for the shell of the building and usually do not include electrical, mechanical, plumbing or fire protection plans. A sub-contractor on a design-build contract may submit these during the construction process.

Zapp!: "A force that energizes people" (Byham, Ph. D. with Cox, 1992, p. 34). "A key to success for new ideas and programs" (Byham, Ph.D. with Cox, 1992, p. 41).

Special Notation

According to the Executive Fire Officer Program, Operational Policies and Procedures, Applied Research Guidelines (1997), if information is paraphrased from an author, the source must be credited by using the author and year-date in parentheses. The punctuation for the sentence should be placed after the parenthesis (p. II-9). The Publication Manual of the American Psychological Association, 4th Edition (APA) specifies, "when paraphrasing or

referring to an idea contained in another work, authors are not required to provide a page number. Nevertheless, authors are encouraged to do so, especially when it would help an interested reader locate the relevant passage in a long or complex text" (p. 97).

This researcher chose to include page numbers when paraphrasing or referring to an idea from an author.

Results

The results of the research project were based on a thorough analysis of all the research information. These included journal articles, periodicals, manuals, books, and reports.

Research Question One

Are there existing inspection programs that utilize paid on call firefighters to do fire inspections?

There are existing inspection programs that utilize paid-on-call firefighters to conduct fire inspections. Eberle (1993) found organizations that use combination volunteer and paid personnel, that volunteers were a viable tool in maintaining or increasing the enforcement of fire codes (p. 8). Dextras (1992) wrote that if the fire service is truly proactive, the concept of prevention should be of primary importance (p. 1). The fire service is a general term that applies to any fire department, whether the department is full-time, paid on call, or volunteer. The Fire Chiefs Handbook (1995) states that if firefighters who are paid on call conduct fire inspections,

then training becomes an important factor (p. 964). How these individuals are chosen may have an enormous impact on the success of the program. They should be selected based on their desire to work in the bureau, make a difference, and be willing and able to learn, and commit to the job for an extended period of time (p. 971).

Corbett (1990) coincides with The Fire Chiefs Handbook in stating that the individuals who work in the Bureau must have a desire to work there (p. 67).

Research Question Two

How extensive should training be?

"More than any other single factor, training is the critical element in a successful company level inspection program" (Campbell, 1991, p. 13). The Fire Chief's Handbook, (1995) states that it's dangerous to both the public and to firefighters to have an untrained prevention staff as well as a waste of the city's financial resources (p. 971). Fire inspectors are expected to prepare complete inspection and plan review reports, documenting all deficiencies found during inspections or plan reviews. They are expected to enforce fire codes and standards uniformly. An advantage to standardized basic and advanced training is that personnel will handle similar situations in the same manner. This avoids multiple interpretations (Bachter & Brennan, 1995, p. 985).

With rapidly changing technologies and constantly changing codes, personnel must have periodic training (Corbett, 1990, p. 68).

Other areas that are important to include in training for fire inspectors are the proper way to dress, the proper way to answer and talk on the telephone. Fire inspectors will have to deal with complaints or miscellaneous inquiries and need to be trained to respond to this and to project a good image to customers (Smith, 1997, p. 78).

Hayden (1993) writes that striving to provide a high quality of customer service for those in a regulatory role can be trying. He points out examples of owners and tenants, especially in urban/suburban settings, whose only motivation is to make the most money possible. This includes quick-money schemes, owners of multiple run-down properties, companies that hide their assets and the identity of their investors, and owners who don't have the money to comply with the code. In these situations, the owners and tenants will question, evade, ignore, play dumb, and defy authority. In these cases, when monetary gain can result from violating the fire code, an inspector must be well trained to how to act in a true regulatory role (pp. 50-51, 55).

Desatnick (1987) explains that teaching about superiority in customer service and how to achieve it is necessary. He adds that a traditions program should be included in an orientation program. The program would include who we are, what we represent, how we do business, company values, common language, why we are in business, who our competitors are, who our customers are, and how we should treat them. Inspectors should be trained to work independently and as a team. They should understand what the challenges are and what the opportunities are. He adds that training should be repeated continuously to reinforce and maintain this behavior (pp. 40, 51).

Gibbs (1995) suggested viewing the community as a customer (p. 14). Templeton (1996) encouraged one to understand how the customer perceives service quality (p. 67). Paulsgrove

(1991), like Hayden (1993), wrote that customer service must be weighed against the community's need for regulation (p. 54; p. 55).

Campbell (1994) wrote that training should not be rushed. This will allow time for inspectors to gain confidence that will ensure a positive public image and merit technical proficiency (p. 14).

Different types of properties, because of the hazardous materials that are used, industrial or commercial processes or the number of occupants, will require inspectors to have specialized training (Teems, 1988, p. 385).

In 1993, Hayden stated that the fire inspectors' knowledge is at a level where they can have intelligent discussions with architects and engineers (p. 50).

Corbett (1990) found that training should initially include the bureau's practices and procedures, then move to in-depth training of the codes and laws enforced. Like Teems, (1988) he points out the necessity of training that includes hazardous processes and operations, as well as storage, building construction, and fire protection systems (p. 68).

Being well versed in the building and fire codes is imperative. Training should also include the mechanical code, plumbing code, and electrical code, as all of these have code provisions that directly relate to fire inspections (Bachter & Brennan, 1995, p. 982).

Research Question Three

How are firefighters convinced to direct their commitment from suppression to prevention?

Miller (1992) found benefits that could be realized in utilizing fire suppression personnel that could be marketed to these individuals to direct their commitment to prevention. These included becoming familiar with their district's businesses that they protect, preplanning and ownership information can be kept up to date, and they can get to know the business owners and develop a rapport with them (p. 1).

Donner (1997) markets his program by placing an emphasis on citizen and firefighter safety (p. 100). Campbell (1994) also markets his program by emphasizing the relevance of inspections in providing for firefighter safety by becoming familiar with the various occupancies. He also shows how the relationship of codes affects the spread of fire or allowance of safe egress by the occupants (p.13).

Feisch (1996) explained that the firefighters need to be recognized as shareholders in the inspection program. To do this, the firefighters were given clear objectives that were in line with the department's overall mission, they were involved in changes that were made to the program and were given regular feedback and positive reinforcement. This involvement of the firefighters removed barriers to their being satisfied with the program (p. ii).

From a different perspective, Brown (1991) placed emphasis on working with businesses to eliminate fire hazards instead of correcting violations. Employees were viewed as customers and success was measured in terms of customer satisfaction rather than the traditional measures of productivity (p. ii). Feisch (1996), like Brown (1991), also pointed out as a primary objective of the process was for fire inspectors to avoid the code enforcer role.

To direct the firefighters' commitment to prevention, Feisch (1996) showed that the inspections were necessary and meaningful to the overall mission of the fire department (p. i).

Ten cultural issues that tend to bias firefighters against the inspection process were written by Carter & Rausch in 1989. These issues must be overcome for firefighters to commit to prevention:

1. Firefighters want to fight fires.
2. Some firefighters may not have good people skills when meeting the public.
3. Firefighters may be uncomfortable in their best uniform and on their best behavior.
4. Firefighters are not comfortable interrupting the business owners for the inspection.
5. Firefighters need to connect fire prevention with their primary duty.
6. Firefighters must identify and accept the common goal of inspections.
7. Firefighters must feel comfortable explaining code requirements not easily understood by the public.
8. Firefighter must feel prepared to answer tough code questions.
9. Firefighters must be prepared to deal with negative public reactions to the inspection.
10. Inspections normally result in a longer or more intense workday. (pp.184-185)

To make the commitment from suppression to prevention, firefighters must believe, “The fire service has traditionally honored its heroes, but we must realize there is more than one way to define ‘hero’” (Hennessey, 1991, p. 96).

Research Question Four

How do you instill the same level of professionalism and customer service in part-time fire inspectors as expected from full time inspectors?

First, individuals who work in the fire prevention bureau must have a desire to work there. Both The Fire Chiefs Handbook (1995) and Corbett (1990) noted this. The book Zapp! (1992) shows how empowering employees by encouraging responsibility, acknowledgment, and creativity will help employees take ownership of their jobs. This is accomplished through participative management. Zapp! encourages constant improvement that is not imposed on employees but comes from the individual through empowerment (p. vii – viii). The following list is examples of what Zapps people:

Responsibility

Trust

Being listened to

Teams

Solving problems as a team

Praise

Recognition for ideas

Knowing why you're important to the organization

Flexible controls

Direction (clear key results areas, measurements, goals)

Knowledge (skills, training, information, goals)

Support (approval, coaching, feedback, encouragement)

Resources readily available

Upward and downward communications. (p. 56)

Smith (1997) wrote that a customer relations/customer service program should be in every department. Employees should feel that they have a stake in the success of the program (p. 78).

Desatnick (1987) wrote about an orientation program that included what he called a traditions program. The traditions program consisted of the companies' values, who, what, how, and why (p. 40). To do their job well, and to be committed to superior performance, employees need to know what is expected of them, where their job fits into the total picture, and why they are important. They need to know how their performance will be judged and measured, how they can improve their performance, and how they can develop themselves in their jobs and in the organization (p. 19). He sums it up by writing, "superiority in customer service does not happen by chance" (p. 51). Templeton (1996) feels that unknowingly, customers consider variables such as reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding and tangibles to determine if they are receiving quality customer service (p. 67).

To aid in a successful program, Campbell (1994), Hendges (1991), and Teems (1988), indicated that the use of checklists and forms that are clear, concise, of sufficient detail, and user friendly were essential. Paulsgrove (1991) pointed out that, "It is important to evaluate how our letters and forms represent us professionally" (pp, 55-56). Teems (1988) wrote that having the necessary material resources such as code books and reference standards was equally important to training (p. 385).

Hennessey (1991) feels that firefighters and fire inspectors need to be rewarded for their contributions that will lead to higher motivation. By rewarding them personally and publicly for special achievements and contributions, they will know that you care about them (p. 95).

Customer service and professionalism go hand in hand. Several of the variables that customers unknowingly use to determine whether they are receiving quality customer service are pointed out by Templeton (1996): "Reliability: the consistency and dependability of your performance, Responsiveness: your willingness or readiness to provide service, and Competence: having the required skills and knowledge" (p. 67). Campbell's (1994) research on why company inspections fail, and essential elements to a successful program found, "More than any other single factor, training is the critical element in a successful company level inspection program" (p. 13). Teems, (1988) wrote, "A property inspection program carried out by trained personnel is the backbone of a total fire prevention program" (p. 385). In 1993, Hayden wrote,

> During the past 10 years, the field of fire code enforcement has become more professional. Many states have adopted minimum standards for educating and training code enforcement officials and have increased the emphasis on continual in-service training and education. The knowledge of code enforcement personnel has increased greatly, and their ability to cite problems and intelligently discuss code infractions is at a level where they often can question the work of certified architects and engineers. (p. 50)

Discussion

The research results showed that a majority of the literature is based on company inspection programs; programs that are staffed by full-time firefighters. One important aspect of

this research project was to discover what mistakes and conclusions others made in setting up a program. The results indicated that whether personnel were volunteer, paid on call, or full-time personnel, it wasn't an important issue. The essential and relevant issues were training and customer service.

Training needs to be thorough and ongoing. The public perception is that the individuals who work in the fire prevention bureau are experts (Bachtler & Brennan, 1995, p. 964). Specialized training needs to be included when the individual is expected to inspect occupancies with special processes, hazardous materials, importance because of the number of occupants, storage issues, etc. Inspectors must keep up with new technology and constantly changing codes. Interpretation of the codes is important so that personnel understand the reasons behind the seemingly myriad and complex number of codes. Employees should be given adequate development time to learn the codes and gain the confidence necessary to ensure a positive public image and merit technical proficiency. (Campbell, 1994, p. 14; Corbett. 1900, p. 68).

In situations where monetary gain can result from violating the fire code, there is a need for vigorous enforcement efforts. The fire inspector must be trained to act in a true regulatory role (Hayden, 1993, p. 50).

Desatnick (1987) wrote, "Superiority in customer service does not happen by chance…people will do the right things, and do things right, if they are properly trained to do so" (p. 51). Not only should employees have training in customer service, they should be empowered in their jobs, and they should feel that they have a stake in the program's success and ownership in their jobs (Smith, 1997, p.78).

Truly, there appears to be two concepts here. Good customer service is vital to the organization. If employees are expected to provide good customer service, they in turn must

know that they are important and what they are doing is important. They must receive the proper training and support, and be praised and recognized for their efforts.

Implications of providing the necessary training in the myriad of complex codes and customer service are the time and money for the city to bring an individual to a level in which they are considered confident and proficient.

The results showed that in order to convince firefighters to direct their level of commitment from suppression to prevention, it was necessary to show them the relevance of prevention to suppression. Firefighters can provide a higher level of safety for themselves in buildings where they could fight fires by becoming familiar with buildings and their owners. They will also understand the relationship of the codes that effect the spread of fire in buildings or the allowance of safe egress for the occupants (Donner, 1997, p. 10; Campbell, 1994, p. 14).

Firefighters must also believe that they are shareholders of the program. They do not need to portray the code enforcer but can work with customers to eliminate fire hazards, not correct violations (Brown, 1991, p. ii; Feisch, 1996, p. 7).

Based on all of the research and the previous questions that were answered, it appears that professionalism and customer service go hand in hand with training and the desire to work in the bureau.

Recommendations

A recommendation will be made in the fire prevention bureau budget to the city council and mayor to hire paid-on-call firefighters to supplement the efforts of the full time staff. These firefighters may come from within the fire department or from neighboring departments.

The part-time inspectors will conduct inspections in existing buildings, an area that full time staff is not able to cover due to heavy new construction activity.

The organizational condition appears to be good. The fire prevention bureau has a good relationship with the officers and firefighters of the fire department. Management is responsive to the need to conduct fire inspections in existing buildings. When the budget request is approved, a marketing plan will be implemented to promote the vision and the direction of the program.

The necessary training and education that a fire inspector requires is very extensive. Because there is not a college program for fire inspectors in Minnesota, a list of college classes will be published that identify minimum classes required to apply for the position. The list will be distributed to interested individuals and through announcements to firefighters within the department and to neighboring departments. These required classes would prepare the selected individuals for an in-house training program provided by the fire marshal and full time staff.

The course, Introduction to Fire Inspection Principles and Practices, (FEMA, 1996) will be recommended to be used for the training program. It would be supplemented by the uniform codes that are adopted by the city as well as policies, procedures, and local city ordinances. Curriculum on customer service will also be recommended to be included in the training program.

Existing inspection forms that are currently used and found complete and user friendly will be proposed to be used with the program as well as an existing evaluation questionnaire. The questionnaire will be mailed after the completion of each inspection.

A recommendation will be made to request that the State of Minnesota College system offer a degree or certificate program specifically for fire prevention personnel such as fire inspectors and fire marshals.

References

American Psychological Association. (1996). Publication Manual of the American Psychological Association. (Fourth Edition).

Berner,Karen Wojcik, Michard, Don, Vandercar, Mary. (1991, March). Managing effective code enforcement. Fire Chief, 35, 32-33+.

Bachtler, Joseph, R., Brennen, Thomas, F. (1995). The Fire Chief's Handbook.

Board of Regents, Oklahoma State University. (1987). Fire Inspection and Code Enforcement. (Fifth Edition).

Brace, Thomas R. (1996). Fire in Minnesota 1996.

Brandewie, Cathy. (1996, August). Out of the fire station and into the community. Fire Chief, 40, 64-67.

Brown, Dennis E. (1991). Customer service and company inspections: teaching the elephant to dance. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Byham, William C., Cox, Jeff. (1988). Zapp! The Lightning of Empowerment.

Campbell, Jim, (1994). Why company level inspections fail, and essential elements to a successful program. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Carter, Harry R., Rausch, Erwin. (1989). Management in the Fire Service.

Corbett, Glenn P. (1990, June). The fire prevention bureau. Fire Engineering, 143, 65-68.

Desatnick, Robert L. (1987). Managing to keep the customer: how to achieve and maintain superior customer service throughout the organization. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Dextras, Paul A. (1992). Fire prevention as a priority mission in the fire service. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Donner, Larry D. (1997, April). A better way to manage company inspections. Fire Chief, 41, 100-104.

Eberle, Gary O. (1993). Enforcement inspections by volunteer firefighters. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Feisch, Lyle E. (1996). Leading the way to service oriented company inspection: a study in motivation and teamwork. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Fire Death Rate Trends An International Perspective. (1997). Federal Emergency Management Agency, United States Fire Adminisration .

Gardiner, Daniel B., Jenaway, William F. (1995). Fire Protection in the 21st Century.

Gibbs, Christine. (1995, August). How to make customer service work from the viewpoint of arizona managers. Public Management, 77, 14-17.

Halas, Julius, E. (1991, March). The path of leaders & managers. The Voice, 20, 16.

Hayden, William E. (1993, June). Code enforcement critical to fire prevention. Fire Engineering, 146, 49-55.

Hendges, C. Michael. (1991). Code enforcement by suppression personnel: how to establish a company inspection program. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Hennessey, John M. (1991, September). Motivating firefighters with incentives. Fire Chief, 35, 95-96.

Keith, Gary S. (1995, March-April). The "how to" of pre-incident planning. Minnesota Fire Chief, 31, 38.

Loss Prevention Entails More Than Building Code. (1994). IRI Sentinel Journal, 51, 5-8.

Meyer, Steve. (1991, September). Sizing up your fire department. Fire Chief, 35, 90-91.

Mihelic, Steven G. (1994). Priority fire safety inspections: a new approach to fire prevention. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

Miller, Robert L. (1992). Utilizing and training for fire suppression personnel to accomplish fire prevention duties. (Executive Development Research Paper). (Emmitsburg, MD: National Fire Academy).

National Commission on Fire Prevention and Control. (1973). America Burning. Washington, DC.

National Commission on Fire Prevention and Control. (1987). America Burning Revisited. Washington, DC.

National Fire Data Center. (1997). Fire Death Rate Trends: An International Perspective (MISCNO FA-169)

National Fire Protection Association. (1987). NFPA Inspection Manual.

Paulsgrove, Robin F. (1991, April). Understanding customer service methodology. Fire Chief, 35, 52-58.

Porth, Don. (1994, November). Challenging the fire service to prevent fires. American Fire Journal, 46, 6.

Smith, Jeffrey S. (1997, August). Implementing a customer service program. Fire Engineering, 150, 77-83.

Teems, David H. (1988). Comprehensive fire prevention and code administration. In Coleman, Ronny J. & Granito, John A. (Eds.), Managing Fire Services (pp. 379-401).

Templeton, Randy. (1996, August). Customer service: staying the course. Fire Chief, 40, 58-60+.

U.S. Fire Administration. (1997). Executive fire officer program operational policies and procedures, applied research guidelines. Emmitsburg, MD: U.S. Fire Administration's National Fire Academy.